UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.   : 7,092,924 B1
APPLICATION NO. : 10/086988
DATED   : August 15, 2006
INVENTOR(S)   : Mark D. Levedahl

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 5:
Line 38, after "of these subject to:" delete "$m \leqq n \leqq N$" and insert -- $m \leq n \leq N$ --.

Column 6:
Line 19, delete Equation (5) and insert -- $\forall (i \neq j \text{ and } a(j) > 0)$ --.

Line 27, delete Equation (6) and insert

$$P_a = \frac{e^{-\bar{x}^T R^{-1} \bar{x}/2}}{(2\pi)^{M/2} \sqrt{|R|}} \prod_i^m \frac{e^{-[A_i - B_{a(i)} - \bar{x}]^T (P_i + Q_{a(i)})^{-1} [A_i - B_{a(i)} - \bar{x}]/2}}{(2\pi)^{M/2} \sqrt{|P_i + Q_{a(i)}|}}$$

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Column 8:
Line 19, delete Equation (11) and insert

$$g = 2 \ln \left[\frac{\beta_i P_{TA} P_{TB}}{(2\pi)^{M/2} P_{NTA} P_{NTB}} \right]$$
$$P_{NTA} = \beta_i P_{TB}(1 - P_{TA}) + \beta_{FTB}$$
$$P_{NTB} = \beta_i P_{TA}(1 - P_{TB}) + \beta_{FTA}$$

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Line 39, delete Equation (12) and insert

$$\delta f_i^2 = [A_i^f - B_{a(i)}^f]^T (F_{i,a(i)})^{-1} [A_i^f - B_{a(i)}^f] + \ln(|F_{i,a(i)}|)$$
$$J_{af} = -\bar{x}^T R^{-1} \bar{x} - \ln[(2\pi)^M |R|] - \sum_{i=1}^m \left\{ \begin{array}{ll} \delta x_i^T S_i^{-1} \delta x_i + \ln[|S_i|] + \delta f_i^2 & a(i) \neq 0 \\ g & a(i) = 0 \end{array} \right\}$$

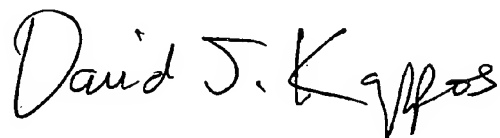--   --.

Column 8:
Line 53, after "make k assignments," delete "$0 \leqq k \leqq m$" and insert -- $0 \leq k \leq m$ --.

Signed and Sealed this

Fourteenth Day of September, 2010

David J. Kappos
Director of the United States Patent and Trademark Office

<u>Column 9:</u>
Line 53, delete Equation (17) and insert

$$J_s - \bar{x}^T R^{-1} \bar{x} - \sum_{i=1}^{s} \left\{ \begin{array}{cc} \delta x_i^T S_i^{-1} \delta x_i + \ln\|S_i\| \\ \overline{g} \end{array} - \ln(d_{min}) \quad \begin{array}{c} a(i) \neq 0 \\ a(i) = 0 \end{array} \right\} + \left\{ \begin{array}{cc} \ln\left([2\pi]^M |R|\right) & n_a = 0 \\ 0 & n_a > 0 \end{array} \right\}$$

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<u>Column 12:</u>
Line 22, after "where" delete "$k_g \geqq 1$" and insert -- $k_g \geq 1$ --.
Line 56, delete Equation (18) and insert

$$P_i = P_i + R$$

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<u>Column 14:</u>
Line 58, Claim 2, after "associated input" delete "are" and insert -- **arc** --.

<u>Column 15:</u>
Line 8, Claim 5, delete the equation found after "the cost function is" and insert

-- $$J_s - \bar{x}^T R^{-1} \bar{x} - \sum_{i=1}^{s} \left\{ \begin{array}{cc} \delta x_i^T S_i^{-1} \delta x_i + \ln\|S_i\| \\ \overline{g} \end{array} - \ln(d_{min}) \quad \begin{array}{c} a(i) \neq 0 \\ a(i) = 0 \end{array} \right\} + \left\{ \begin{array}{cc} \ln\left([2\pi]^M |R|\right) & n_a = 0 \\ 0 & n_a > 0 \end{array} \right\}$$ --.

<u>Column 16:</u>
Line 20, Claim 16, delete the equation found after "the cost function is" and insert

$$J_s - \bar{x}^T R^{-1} \bar{x} - \sum_{i=1}^{s} \left\{ \begin{array}{cc} \delta x_i^T S_i^{-1} \delta x_i + \ln\|S_i\| \\ \overline{g} \end{array} - \ln(d_{min}) \quad \begin{array}{c} a(i) \neq 0 \\ a(i) = 0 \end{array} \right\} + \left\{ \begin{array}{cc} \ln\left([2\pi]^M |R|\right) & n_a = 0 \\ 0 & n_a > 0 \end{array} \right\}$$

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<u>Column 16:</u>
Line 42, Claim 17, after $\overline{X}$, delete "o the cost" and insert -- **of the cost** --.

<u>Column 17:</u>
Line 34, Claim 27, delete the equation found after "the cost function is" and insert

$$J_s - \bar{x}^T R^{-1} \bar{x} - \sum_{i=1}^{s} \left\{ \begin{array}{cc} \delta x_i^T S_i^{-1} \delta x_i + \ln\|S_i\| \\ \overline{g} \end{array} - \ln(d_{min}) \quad \begin{array}{c} a(i) \neq 0 \\ a(i) = 0 \end{array} \right\} + \left\{ \begin{array}{cc} \ln\left([2\pi]^M |R|\right) & n_a = 0 \\ 0 & n_a > 0 \end{array} \right\}$$

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Line 48, after "M=Number of" delete "fist" and insert -- **first** --.

Line 50, delete the equation after "a=Assignment vector:" and insert -- $a_{(i)} > 0 \rightarrow A_i$ --.

Line 57, Claim 29, delete the equation found after "the cost function is" and insert

$$J_s - \bar{x}^T R^{-1} \bar{x} - \sum_{i=1}^{s} \left\{ \begin{array}{cc} \delta x_i^T S_i^{-1} \delta x_i + \ln\|S_i\| \\ \overline{g} \end{array} - \ln(d_{min}) \quad \begin{array}{c} a(i) \neq 0 \\ a(i) = 0 \end{array} \right\} + \left\{ \begin{array}{cc} \ln\left([2\pi]^M |R|\right) & n_a = 0 \\ 0 & n_a > 0 \end{array} \right\}$$

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